



INSTRUCTION MANUAL

HF TRANSCEIVER
IC-78



IMPORTANT

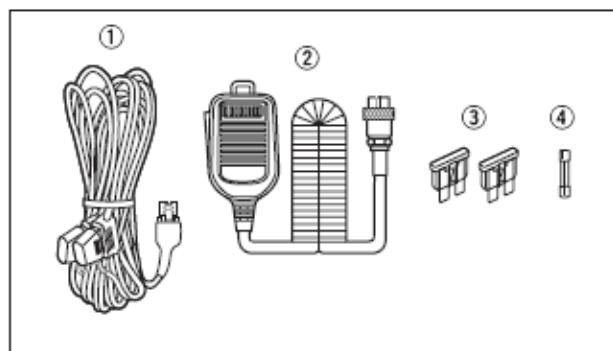
READ THIS INSTRUCTION MANUAL CAREFULLY before attempting to operate the transceiver.

SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and operating instructions for the IC-78.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ DANGER!	Personal death, serious injury or an explosion may occur.
⚠ WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	Recommended for optimum use. No risk of personal injury, fire or electric shock.

SUPPLIED ACCESSORIES



The transceiver comes with the following accessories.

	Qty.
① DC power cable	1
② Hand microphone (HM-36)	1
③ Fuse (ATQ 25 A; for DC cable).....	2
④ Fuse (FGB 4 A; internal use)	1

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PRECAUTIONS

⚠ **DANGER HIGH VOLTAGE! NEVER** touch an antenna connector during transmission. This may result in an electrical shock or burn.

⚠ **WARNING! NEVER** operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

⚠ **WARNING! NEVER** operate the transceiver with an earphone or other audio accessories at high volume levels. Continuous high volume operation may cause a ringing in your ears. If you experience ringing, reduce the volume level or discontinue use.

⚠ **WARNING! NEVER** connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

⚠ **WARNING! NEVER** connect the transceiver to a power source of more than 16 V DC such as a 24 V DC. This could cause a fire or damage the transceiver.

⚠ **WARNING! NEVER** reverse the DC power cable polarity when connecting to a power source. This could damage the transceiver.

⚠ **WARNING! NEVER** cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the transceiver may be damaged.

⚠ **WARNING! NEVER** let metal, wire or other objects touch any internal part or connectors on the rear panel of the transceiver. This may result in an electric shock or this could cause a fire or damage the transceiver.

⚠ **WARNING! NEVER** operate or touch the transceiver with wet hands. This may result in an electric shock or may damage the transceiver.

⚠ **WARNING!** Immediately turn the transceiver power OFF and remove the power cable if it emits an abnormal odor, sound or smoke. Contact your Icom dealer or distributor for advice.

CAUTION: NEVER expose the transceiver to rain, snow or any liquids.

CAUTION: NEVER change the internal settings of the transceiver. This may reduce transceiver performance and/or damage to the transceiver.

CAUTION: NEVER place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury.

DO NOT operate the transceiver near unshielded electrical blasting caps or in an explosive atmosphere.

DO NOT push the PTT when not actually desiring to transmit.

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DO NOT use harsh solvents such as benzine or alcohol to clean the transceiver, as they will damage the transceiver's surfaces. If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth.

DO NOT operate or place the transceiver in areas with temperatures below -10°C ($+14^{\circ}\text{F}$) or above $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$).

Be aware that temperatures on a vehicle's dashboard can exceed $+80^{\circ}\text{C}$ ($+176^{\circ}\text{F}$) in direct sunlight, resulting in permanent damage to the transceiver if left there for extended periods.

DO NOT place the transceiver in excessively dusty environments or in direct sunlight.

DO NOT place the transceiver against walls or put anything on top of the transceiver. This will obstruct heat dissipation.

Place the transceiver in a secure place to avoid inadvertent use by children.

During mobile operation, **NEVER** place the transceiver where air bag deployment may be obstructed.

During mobile operation, **DO NOT** place the transceiver where hot or cold air blows directly onto it.

During mobile operation, **DO NOT** operate the transceiver without running the vehicle's engine. When transceiver power is ON and your vehicle's engine is OFF, the vehicle's battery will soon become exhausted.

Make sure the transceiver power is OFF before starting the vehicle engine. This will avoid possible damage to the transceiver by ignition voltage spikes.

During maritime mobile operation, keep the transceiver and microphone as far away as possible from the magnetic navigation compass to prevent erroneous indications.

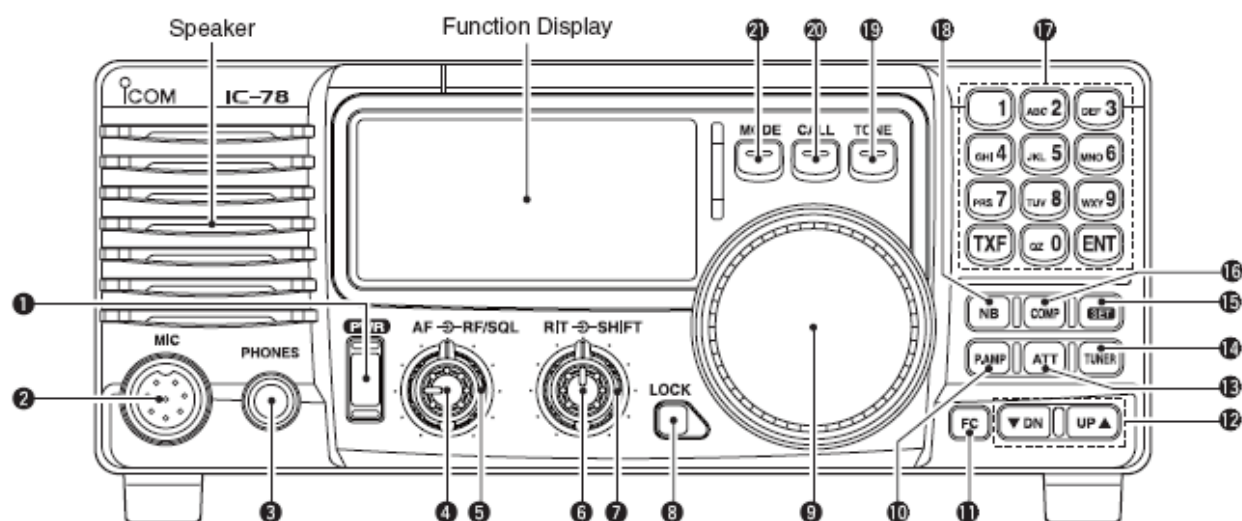
BE CAREFUL! The heatsink will become hot when operating the transceiver continuously for long periods of time.

BE CAREFUL! If a linear amplifier is connected, set the transceiver's RF output power to less than the linear amplifier's maximum input level, otherwise, the linear amplifier will be damaged.

Use only supplied or optional Icom microphones. Other manufacturer's microphones have different pin assignments, and connecting to the IC-78 may damage the transceiver.

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■ Front panel



1 POWER SWITCH [PWR]

- ➔ Push to turn ON the power.
 - First, confirm the DC power supply is ON.
- ➔ Hold down for 1 second to turn OFF the power.
- ➔ While holding down [SET], push [PWR] to enter the Initial Set mode. (p. 27)

2 MICROPHONE CONNECTOR [MIC]

- Accepts the supplied or optional microphone.
- See page 45 for appropriate microphones.
- See page 7 for microphone connector information.

3 HEADPHONE JACK [PHONES] (p. 9)

- Accepts headphones.
- When headphones are connected, the internal or external speaker does not function.

4 AF CONTROL [AF] (inner control)

- Adjusts the audio output level.

5 RF GAIN/SQUELCH CONTROL [RF/SQ] (outer control, pp. 14, 30)

- Adjusts the squelch threshold level. The squelch removes noise output from the speaker (closed) when no signal is received.
- The squelch is available for all modes.
- The control can be set as the squelch plus RF gain controls or squelch control only (RF gain is fixed at maximum) in the Initial Set mode.

6 RIT CONTROL [RIT] (inner control, p. 18)

- ➔ Shifts the receive frequency ± 1.2 kHz for clear reception of an off frequency signal.
- Rotate the control clockwise to increase the frequency, or counterclockwise to decrease the frequency. "RIT" is displayed on the display.

7 IF SHIFT CONTROLS [SHIFT]

- (outer control, p. 19)
- Shifts the center frequency of the receiver's IF passband.
- Rotate the control clockwise to shift the center frequency higher, or counterclockwise to shift the center frequency lower.

8 LOCK SWITCH [LOCK] (p. 13)

- Push to turn the dial lock function ON or OFF.
- The dial lock function electronically locks the Channel Selector.

9 CHANNEL SELECTOR

- Selects an operating channel, selects values in the Quick/Initial Set mode items, and so on.

10 PREAMP SWITCH [P.AMP] (p. 18)

- Push to turn the preamp ON or OFF.

11 FC SWITCH [CH]

- ➔ Push to change the indication, channel name or stored frequency. (p. 13)
- ➔ **This key action only for some versions.**
- ➔ Hold down for 1 second to enter the VFO mode. (p. 34)

12 MEMORY CHANNEL UP/DOWN SWITCHES

- [▼ DN]/[UP ▲]
- ➔ Push to select the desired Memory channel. (p. 12)
- ➔ Hold down for 1 second to start scanning. (p. 13)
- ➔ Push to select the Quick/Initial Set mode items while the Quick/Initial Set mode is selected. (p. 27)
- ➔ Push to select the character while editing the channel name. (p. 26)